REMARKS

Claims 1-12 remain in connection with the present application, with claims 13-16 being previously cancelled in the prior Response. Claims 1 and 4 are independent.

Finality Improper

Applicant thanks the Examiner for the indication that Applicant's arguments filed November 4, 2004, were fully considered and were persuasive. In response thereto, the Examiner indicates that the various rejections have been withdrawn and new rejections have been substituted therefore. However, with regard to the rejection of independent claim 4, Applicant respectfully submits that Applicant's amendment to claim 4 did not necessitate this new ground of rejection. Thus, the finality of the rejection of claim 4 is improper.

Regarding the rejection of claim 1, this rejection was previously made over U.S. Patent No. 4,628,530, in view two (2) other U.S. Patents, namely Azima et al. and Meyer et al. However, the rejection of claim 4 was a different rejection, and was one of Yashima et al. in view of Azima et al.

In response to the Examiner's rejection, Applicant's representative argued that even assuming *arguendo* that the references could be combined, the prior art references still fail to teach or suggest at least a transfer for function in the filter device being the inverse of a frequency response of a flat surface loud speaker. At least such a feature was not taught or suggested in the references applied by the Examiner, and in response thereto, the Examiner withdrew his rejection. Although an amendment had been made to claim 4, this amendment was not argued in Applicant's response and it is clear that the Examiner withdrew his rejection based upon an element of claim 4 which was present in the original claim, and

which was not amended.

In response to Applicant's arguments, the Examiner not only withdrew the rejection but applied a rejection over two (2) new pieces of prior art. The Examiner now rejects claim 4 over U.S. Patent No. 4,628,530 in view of the reference to Smith, GB 2, 265, 519. Thus, completely new rejection has been applied by the Examiner, including two (2) new pieces of prior art. Thus, Applicant respectfully submits that the Examiner has applied this new grounds of rejection in view of Applicant's response; and that this new grounds of rejection was not one necessitated by Applicant's Amendment. Accordingly, the Examiner is not entitled to make the rejection final and thus the finality of the rejection must be withdrawn. Therefore, withdrawal of the finality of the present rejection is respectfully requested.

Prior Art Rejections

The Examiner now rejects claims 1, 2, 4, 5, 7 and 14 under 35 U.S.C. §103 as being unpatentable over U.S. Patent No. 4,628,530 (the '530 Patent) in view of a new reference to Smith et al. (the Smith et al. '519 publication), GB 2,265,519. This rejection is respectfully traversed.

Initially, Applicant notes that the Examiner admits that U.S. Patent No. 4,628,530 fails to teach or suggest a method of operation of a flat surface loud speaker. Despite this admission that the '530 Patent fails to even be related to the basic aspects of claim 1, namely the operation of a flat surface loud speaker, the Examiner alleges that the concept of compensating for non-linear characteristics of a flat panel loud speaker was well known in the art at the time of filing; and bases these allegations on the newly cited reference to Smith et al., GB 2,265,519 (the Smith et al. '519 publication). Applicant respectfully traverses these

assertions.

First of all, Applicant respectfully submits that the '530 Patent is deficient with regard to the teachings of claim 1, for several reasons, as set forth in Applicant's Amendment of November 4, 2004, the contents of which are incorporated herein by reference in their entirety. In particular, as the '530 reference has nothing to do with flat surface loud speakers, it can clearly cannot have anything to do with the specific type of method for operation of a flat surface loud speaker as set forth in claim 1 of the present application. The method of claim 1 is initially directed to a method for operation of a flat surface loud speaker in which one oscillating coil is mounted on a surface in a form of a plate, having predetermined material characteristics. No such flat surface loud speaker is present in the '530 Patent, let alone one with an oscillating coil mounted on a surface in the form of a plate having predetermined material characteristics as set forth in claim 1. Further, as indicated in the previous response, the '530 patent includes teachings which are limited to correcting frequency characteristics of an electric input signal, and does nor disclose or has nothing to do with the determining at least an inverse frequency curve and compensating for frequency response of a flat surface loud speaker based upon a transfer function of a filter device. Thus, there are several deficiencies with regard to the '530 Patent.

Even assuming *arguendo* that the Smith et al. '519 publication could be combined with that of the '530 Patent, which Applicant does not admit, the teachings of the Smith et al. '519 publication would still fail to makeup for at least the previously mentioned deficiencies with regard to claim 1 of the present application for example.

Initially, Applicant notes that the Smith et al. '519 publication was both mentioned in paragraph [0006] of page two (2) of the Substitute Specification of the present application

and was also submitted in the Information Disclosure Statement of October 19, 2001. Thus, Applicant was aware of the deficiencies of the Smith et al. '519 publication and has distinguished over these decadences as will be indicated as follows.

First, the Smith et al. speaker is of a type of a conventional membrane loud speaker, the box of which is distorted to a flat cavity. The flat monopole loud speaker of the Smith et al. '519 publication includes a sound radiating element which is **a membrane having a low mass and stiffness**. Thus, contrary to that set forth in claim 1 of the present application, the Smith et al. '519 publication fails to teach or suggest at least a "...a surface in the form of a plate having predetermined material characteristics", as set forth in claim 1 (as well as claim 4) of the present application.

Such a sound radiating element of the Smith et al. '519 publication including a membrane having low mass and stiffness is not a plate, such as back plate of a loud speaker for example, and is instead made from a thin sheet of electrically insulating material which needs to be tensioned by a flexible strip and tensioning bolt for example. The flat surface loud speaker according to the present invention is claimed in claim 1, including a mounting surface in the form of a plate having predetermined material characteristics, is one which instead can have a certain bending stiffness for example (such a wooden plate, glass plate, a plastic plate made from polyurethane foam, etc.), which is able to perform bending of waves for sound emission. Accordingly, at least such a feature of claim 1 (and of claim 4) of the present application is not taught or suggested in either of the '530 Patent and the '519 publication, or their combination, even assuming *argendo* that they could be combined.

Secondly, the membrane of the '519 publication loud speaker is driven over most of its surface by a combination of conducting strips printed on the membrane and a number of

parallel magnetic strips of the back plate, which ultimately have magnetic north and south poles on their top side. Contrary to this, the surface in the form of the plate of the present application, as set forth in claim 1 (and as also set forth in claim 4) includes at least one oscillating coil mounted thereon. Thus, the plate is driven by stimulating the oscillating coil, wherein a drive force is applied at position to the coil.

To the contrary, the Smith et al. '519 publication teaches applying the driving force of a substantial portion of the surface. The Examiner alleges that some type of coil is obviously present in the '530 Patent, but even if such a coil were present, the use of such a coil would clearly be contrary to the teachings of the flat surface loud speaker of the '519 publication, which requires a combination of conducting strips printed on a low mass and stiffness membrane. Accordingly, such diverse teachings of the '530 Patent and the Smith et al. '519 publication would clearly not be combinable to one of ordinary skill in the art. Therefore, such a feature cannot be present in an alleged combination (even if combinable) of the '530 Patent and the Smith et al. '519 publication.

Additionally, with regard to the Smith et al. '519 publication, to account for non-linearity, the incoming signal is fed into the electronic re-linearitying device, which rescales the incoming signal to give a displacement which is proportional to the input signal. The re-linearizing electronics including a memory and a control section carry out algorithmic rescaling to normalize the signal using parameters which may be modified by feedback from the microphone.

However, contrary to this aspect, as claimed in claim 1 for example, in the measuring mode the acoustic frequency response of the flat surface loud speaker is measured, the frequency curve is determined, an inverse frequency curve is determined, and the inverse

frequency curve is simulated in the filter device as a transfer function of the filter device. Thus, the Smith et al. '519 publication teaches a loud speaker and method of operation which differs substantially than the method set forth in claim 1. This clearly includes the sound of any element, the driving mechanism (the two (2) of which cause different origins/factors for the non-linearity) and the principles of signal processing. Accordingly, not only does the '530 Patent fail to teach or suggest at least determining an inverse frequency curve to frequency curve and determining the acoustic response of a loud speaker as set forth in Applicant's Amendment of November 4, 2004, the 'Smith et al. 519 publication fails to makeup for at least such a deficiency. Accordingly, withdrawal of the rejection of independent claim 1 and all claims dependent thereon is respectfully requested.

As set forth above, claim 4 of the present application is directed to a flat surface loud speaker which includes at least one oscillating coil mounted on the surface in the form of a plate having predetermining material characteristics, and also including a filter device wherein a transfer function of the filter device is the inverse of a frequency response of the flat surface loud speaker. At least such features are not taught or suggested by the alleged combination of the '530 Patent and the Smith et al. '519 publication for reasons somewhat similar to those set forth above, even assuming *arguendo* that they could be combined. Accordingly, withdrawal of the rejection of independent claim 4 and all claims dependent thereon is respectfully requested.

No Motivation to Combine References

In addition, Applicant respectfully submits that the Examiner has still failed to provide any motivation for combining the teachings of the prior art. Without the submission

of evidence of motivation, suggestion or desirability to combine the teachings of the '530 Patent with those of the Smith et al. '519 publication, the Examiner has not established a proper *prima facie* case of evidence. Applicant again reminds the Examiner that in order to establish a *prima facie* case of obviousness, there must be some evidence of motivation, suggestion or desirability to combine the two references.

Instead of alleging motivation for combining the teachings of the references, the Examiner merely states:

> "Smith discloses a flat loudspeaker and compensating for the nonlinear characteristics (page 4, lines 1-19). Thus, it would have been obvious to use Op De Beek's method of operation with a flat loudspeaker in order to relinearize or rescale the incoming signal to give a displacement, which is proportional to the input signal."

Applicant respectfully submits this is clearly not evidence of any motivation, suggestion or desirability to combine two (2) or more references. Instead, the Examiner merely speculates and provides unsubstantiated statements, which fail to provide any reasons as to why one of ordinary skill in the art would be led to combine the teachings of the two (2) prior art references. Absence such evidence of reasons for combinability, the objection must be withdrawn.

Again, Applicant points the Examiner to the case of *In re Sang Lee*, 61 USPQ2d 1430 (Fed. Cir. 2002), wherein it stated that relying on common knowledge or common sense of a person of ordinary skill in the art without any specific hint or suggestion of this in a particular reference is not a proper standard for reaching the conclusion of obviousness. Again, the Applicant has requested that if the Examiner is relying on personal knowledge in support of finding what is known in the art, **the Examiner must provide an Affidavit or Declaration setting forth specific factual statements and explanations to support the finding**. **See 37**

CFR 1.104(d)(2) and MPEP §2144.03(c). Accordingly, Applicant respectfully again challenges the Examiner's alleged motivation and respectfully requests the Examiner to withdraw the rejection or provide an Affidavit or Declaration as set forth above if the rejection is to be maintained.

Teaching Away

A prior art reference may be considered teaching away when a person of ordinary skill, upon reading a reference, would be discouraged from following the path set out in the reference, or would be lead in a direction divergent from the path that was taken by the Applicant. See *In re Gurley*, 31 USPQ2d 1130 (Fed. Cir. 1994).

As set forth above, the '530 Patent is not directed to any type of flat surface loud speaker and the Smith et al. '519 publication is, in turn, directed to a conventional membrane loud speaker, the box of which is distorted to a flat cavity. As indicated above, even if the '530 Patent did include some type of oscillating coil, the use of such an oscillating coil would teach away from any combination with the Smith et al. '519 patent, which instead utilizes conducting strips printed on a membrane over most of its surface, along with a number of parallel magnetic strips of the back plate which alternatively have magnetic north and south poles of their top sides. Use of an oscillating coil would apply drive force at a position of the coils, while the Smith et al. '519 publication teaches the application of a drive force over a substantial portion of the surface. Such divergent teachings clearly teach away from any combination of the '530 Patent and the Smith et al. '519 publication. Thus, one of ordinary skill in the art would clearly be discouraged from combining the teachings of the '530 Patent and the Smith et al. '519 publication, especially in view of the arbitrary combination set forth

by Examiner. Accordingly, withdrawal of the rejection is respectfully requested.

Thus, withdrawal of the outstanding rejection and allowance of each of independent claims 1 and 4 and all claims dependent thereon, is respectfully requested.

Additional Prior Art Rejections

Additionally, the Examiner has rejected claim 3 under 35 U.S.C. §103 as being unpatentable over the '530 Patent in view of the Smith et al. '519 publication, and further in view of Yashima et al.; has rejected claims 6 and 7 over the combination of the alleged combination of the '530 Patent, the Smith et al. '519 publication, and Craven et al.; has rejected claim 8 over the '530 Patent in view of the Smith et al. '519 publication and in view of Tanaka; and has rejected claims 10-12 under 35 U.S.C. §103 as being unpatentable over the alleged combination of the '530 Patent, the Smith et al. '519 publication, Craven et al., and Tanaka. Applicants respectfully traverse these rejections for at least the reasons set forth above and further submit that even assuming *arguendo* that any Yashima et al., Craven et al., and Tanaka could be combined with either one or both of the '530 Patent and the Smith et al. '519 publication (which Applicant does not admit), they would still fail to makeup for the previously mentioned deficiencies set forth with regard to independent claims 1 and 4 of the present application. Accordingly, withdrawal of all outstanding objections and rejections is respectfully requested.

CONCLUSION

Accordingly, in view of the above amendments and remarks, reconsideration of all outstanding objections and rejections and allowance of each of claims 1-12 in connection

with the present application is earnestly solicited.

Pursuant to 37 C.F.R. §§ 1.17 and 1.136(a), Applicant hereby petitions for a one (1) month extension of time for filing a reply to the outstanding Office Action and submit the required $120.00 extension fee herewith.

If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the telephone number listed below.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 08-0750 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

Respectfully submitted,

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